

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/541,737
Source: PG
Date Processed by STIC: 2/13/06

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PCT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/541,737

DATE: 02/13/2006
TIME: 15:17:15

Input Set : A:\GC787-2-SEQLIST.TXT
Output Set: N:\CRF4\02132006\J541737.raw

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4 <110> APPLICANT: Leeflang, Chris
5     Van der Kleij, Wilhelmus A.H.
7 <120> TITLE OF INVENTION: Methods for Site-Directed Mutagenesis
8     and Targeted Randomization
11 <130> FILE REFERENCE: GC787-2
13 <140> CURRENT APPLICATION NUMBER: US 10/541,737
14 <141> CURRENT FILING DATE: 2005-07-08
16 <150> PRIOR APPLICATION NUMBER: PCT/US04/01334
17 <151> PRIOR FILING DATE: 2004-01-16
19 <150> PRIOR APPLICATION NUMBER: US 60/440,792
20 <151> PRIOR FILING DATE: 2003-01-16
22 <160> NUMBER OF SEQ ID NOS: 6
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 275
28 <212> TYPE: PRT
29 <213> ORGANISM: Bacillus amyloliquefaciens
31 <400> SEQUENCE: 1
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33   1           5           10          15
34 His Ser Gln Gly Tyr Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp
35   20          25          30
36 Ser Gly Ile Asp Ser Ser His Pro Asp Leu Lys Val Ala Gly Gly Ala
37   35          40          45
38 Ser Met Val Pro Ser Glu Thr Asn Pro Phe Gln Asp Asn Asn Ser His
39   50          55          60
40 Gly Thr His Val Ala Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly
41   65          70          75          80
42 Val Leu Gly Val Ala Pro Ser Ala Ser Leu Tyr Ala Val Lys Val Leu
43   85          90          95
44 Gly Ala Asp Gly Ser Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu
45   100         105         110
46 Trp Ala Ile Ala Asn Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly
47   115         120         125
48 Pro Ser Gly Ser Ala Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala
49   130         135         140
50 Ser Gly Val Val Val Val Ala Ala Ala Gly Asn Glu Gly Thr Ser Gly
51   145         150         155         160
52 Ser Ser Ser Thr Val Gly Tyr Pro Gly Lys Tyr Pro Ser Val Ile Ala
53   165         170         175
54 Val Gly Ala Val Asp Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Val
55   180         185         190
56 Gly Pro Glu Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr

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57	195	200	205
58	Leu Pro Gly Asn Lys Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Ser		
59	210	215	220
60	Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn		
61	225	230	235
62	Trp Thr Asn Thr Gln Val Arg Ser Ser Leu Glu Asn Thr Thr Thr Lys		240
63	245	250	255
64	Leu Gly Asp Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala		
65	260	265	270
66	Ala Ala Gln		
67	275		
69	<210> SEQ ID NO: 2		
70	<211> LENGTH: 275		
71	<212> TYPE: PRT		
72	<213> ORGANISM: Bacillus subtilis		
74	<400> SEQUENCE: 2		
75	Ala Gln Ser Val Pro Tyr Gly Ile Ser Gln Ile Lys Ala Pro Ala Leu		
76	1	5	10
			15
77	His Ser Cln Cly Tyr Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp		
78	20	25	30
79	Ser Gly Ile Asp Ser Ser His Pro Asp Leu Asn Val Arg Gly Gly Ala		
80	35	40	45
81	Ser Phe Val Pro Ser Glu Thr Asn Pro Tyr Gln Asp Gly Ser Ser His		
82	50	55	60
83	Gly Thr His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly		
84	65	70	75
			80
85	Val Leu Gly Val Ser Pro Ser Ala Ser Leu Tyr Ala Val Lys Val Leu		
86	85	90	95
87	Asp Ser Thr Gly Ser Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu		
88	100	105	110
89	Trp Ala Ile Ser Asn Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly		
90	115	120	125
91	Pro Thr Gly Ser Thr Ala Leu Lys Thr Val Val Asp Lys Ala Val Ser		
92	130	135	140
93	Ser Gly Ile Val Val Ala Ala Ala Gly Asn Glu Gly Ser Ser Gly		
94	145	150	155
			160
95	Ser Thr Ser Thr Val Gly Tyr Pro Ala Lys Tyr Pro Ser Thr Ile Ala		
96	165	170	175
97	Val Gly Ala Val Asn Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Ala		
98	180	185	190
99	Gly Ser Glu Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr		
100	195	200	205
101	Leu Pro Gly Gly Thr Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Thr		
102	210	215	220
103	Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Thr		
104	225	230	235
105	Trp Thr Asn Ala Gln Val Arg Asp Arg Leu Glu Ser Thr Ala Thr Tyr		240
106	245	250	255
107	Leu Gly Asn Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala		

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108	260	265	270
109 Ala Ala Gln			
110	275		
112 <210> SEQ ID NO: 3			
113 <211> LENGTH: 274			
114 <212> TYPE: PRT			
115 <213> ORGANISM: <i>Bacillus licheniformis</i>			
117 <400> SEQUENCE: 3			
118 Ala Gln Thr Val Pro Tyr Gly Ile Pro Leu Ile Lys Ala Asp Lys Val			
119 1	5	10	15
120 Gln Ala Gln Gly Phe Lys Gly Ala Asn Val Lys Val Ala Val Leu Asp			
121	20	25	30
122 Thr Gly Ile Gln Ala Ser His Pro Asp Leu Asn Val Val Gly Gly Ala			
123	35	40	45
124 Ser Phe Val Ala Gly Glu Ala Tyr Asn Thr Asp Gly Asn Gly His Gly			
125	50	55	60
126 Thr His Val Ala Gly Thr Val Ala Ala Leu Asp Asn Thr Thr Gly Val			
127 65	70	75	80
128 Leu Gly Val Pro Ser Val Ser Leu Tyr Ala Val Lys Val Leu Asn			
129	85	90	95
130 Ser Ser Gly Ser Gly Ser Tyr Ser Gly Ile Val Ser Gly Ile Glu Trp			
131	100	105	110
132 Ala Thr Thr Asn Gly Met Asp Val Ile Asn Met Ser Leu Gly Gly Ala			
133	115	120	125
134 Ser Gly Ser Thr Ala Met Lys Gln Ala Val Asp Asn Ala Tyr Ala Arg			
135	130	135	140
136 Gly Val Val Val Val Ala Ala Ala Gly Asn Ser Gly Asn Ser Gly Ser			
137 145	150	155	160
138 Thr Asn Thr Ile Gly Tyr Pro Ala Lys Tyr Asp Ser Val Ile Ala Val			
139	165	170	175
140 Gly Ala Val Asp Ser Asn Ser Asn Arg Ala Ser Phe Ser Ser Val Gly			
141	180	185	190
142 Ala Glu Leu Glu Val Met Ala Pro Gly Ala Gly Val Tyr Ser Thr Tyr			
143	195	200	205
144 Pro Thr Asn Thr Tyr Ala Thr Leu Asn Gly Thr Ser Met Ala Ser Pro			
145	210	215	220
146 His Val Ala Gly Ala Ala Leu Ile Leu Ser Lys His Pro Asn Leu			
147 225	230	235	240
148 Ser Ala Ser Gln Val Arg Asn Arg Leu Ser Ser Thr Ala Thr Tyr Leu			
149	245	250	255
150 Gly Ser Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Glu Ala Ala			
151	260	265	270
152 Ala Gln			
154 <210> SEQ ID NO: 4			
155 <211> LENGTH: 269			
156 <212> TYPE: PRT			
157 <213> ORGANISM: <i>Bacillus lentinus</i>			
159 <400> SEQUENCE: 4			
160 Ala Gln Ser Val Pro Trp Gly Ile Ser Arg Val Gln Ala Pro Ala Ala			

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161 1 5 10 15
 162 His Asn Arg Gly Leu Thr Gly Ser Gly Val Lys Val Ala Val Leu Asp
 163 20 25 30
 164 Thr Gly Ile Ser Thr His Pro Asp Leu Asn Ile Arg Gly Gly Ala Ser
 165 35 40 45
 166 Phe Val Pro Gly Glu Pro Ser Thr Gln Asp Gly Asn Gly His Gly Thr
 167 50 55 60
 168 His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Leu
 169 65 70 75 80
 170 Gly Val Ala Pro Ser Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala
 171 85 90 95
 172 Ser Gly Ser Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala
 173 100 105 110
 174 Gly Asn Asn Gly Met His Val Ala Asn Leu Ser Leu Gly Ser Pro Ser
 175 115 120 125
 176 Pro Ser Ala Thr Leu Glu Gln Ala Val Asn Ser Ala Thr Ser Arg Gly
 177 130 135 140
 178 Val Leu Val Val Ala Ala Ser Gly Asn Ser Gly Ala Gly Ser Ile Ser
 179 145 150 155 160
 180 Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val Gly Ala Thr Asp Gln
 181 165 170 175
 182 Asn Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Ala Gly Leu Asp Ile
 183 180 185 190
 184 Val Ala Pro Gly Val Asn Val Gln Ser Thr Tyr Pro Gly Ser Thr Tyr
 185 195 200 205
 186 Ala Ser Leu Asn Gly Thr Ser Met Ala Thr Pro His Val Ala Gly Ala
 187 210 215 220
 188 Ala Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn Val Gln Ile
 189 225 230 235 240
 190 Arg Asn His Leu Lys Asn Thr Ala Thr Ser Leu Gly Ser Thr Asn Leu
 191 245 250 255
 192 Tyr Gly Ser Gly Leu Val Asn Ala Glu Ala Ala Thr Arg
 193 260 265
 195 <210> SEQ ID NO: 5
 196 <211> LENGTH: 27
 197 <212> TYPE: DNA
 198 <213> ORGANISM: Artificial Sequence
 200 <220> FEATURE:
 201 <223> OTHER INFORMATION: primer
 203 <400> SEQUENCE: 5
 204 gtgtgtggc ccatcgtct gacgacc 27
 206 <210> SEQ ID NO: 6
 207 <211> LENGTH: 27
 208 <212> TYPE: DNA
 209 <213> ORGANISM: Artificial Sequence
 211 <220> FEATURE:
 212 <223> OTHER INFORMATION: primer
 214 <400> SEQUENCE: 6
 215 gtgtgtggc cctattcgga tattgag 27

VERIFICATION SUMMARY

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